Conclusion: Cytological malignant positive findings could be obtained during surgery using the run-across method, which is helpful for decision making regarding a completion lobectomy.

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Chronic obstructive pulmonary disease decreases postoperative survival due to higher recurrence in male patients with stage IA lung cancer

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Objective: Chronic obstructive pulmonary disease (COPD) poses a high risk for postoperative pulmonary complications after lung cancer surgery. We sought to determine the impact of this disease on long-term survival after surgical resection and to identify prognostic factors.

Methods: A retrospective chart review was done of 251 male patients with pathological stage IA lung cancer who had a lobectomy with systematic lymph node dissection (17.2%) out of 1461 patients who underwent lung cancer surgery at our hospital from January 1990 to April 2005. The functional definition of COPD, according to the spirometric guidelines of the Global Initiative for Chronic Obstructive Lung Disease, was (forced expiratory volume in 1 second) /(forced vital capacity) < 70%. The postoperative complications were compared between the non-COPD (178 patients) and COPD (73 patients) groups. Overall survival and disease-free interval were analyzed using the Kaplan-Meier method and log rank test. Prognostic factors were identified by univariate and multivariate analyses.

Results: The frequencies of all pulmonary complications except pneumonia were similar between the two groups. Overall survival and disease-free interval in the COPD group were significantly worse than those in the non-COPD group ($p<.05$). Prognostic factors were tumor size and severity of COPD.

Conclusion: Although the incidences of postoperative complications were acceptable in patients with COPD, these patients had poorer long-term survivals due to higher incidence of tumor recurrence. We should be watchful not only for postoperative functional deterioration but also for higher recurrence of lung cancer in patients with COPD.

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A comparison of conventional lobectomy versus video-assisted thoracoscopic surgery lobectomy for stage IA lung cancers using a matched-pair analysis

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Background: Video Assisted Thoracoscopic Surgery (VATS) lobectomy as minimally invasive approaches has been widely applied for early stage non-small cell lung cancer (NSCLC) patients. Although the evidence in published data demonstrated the advantage of minimally invasive surgery, cancer-specific issues such as recurrence and survival rate always arose and were discussed. The aim of this study was to compare the outcomes between patients with conventional and VATS lobectomy for stage IA NSCLC using a matched-pair analysis.

Methods: We reviewed 242 patients with complete lung resections who underwent either conventional or video-assisted approach for pathological stage IA NSCLC at our institution from 1995 through 2004. From this cohort, 48 pairs of conventional and VATS lobectomy patients were matched according to age (± 6 years), gender, tumor size (± 5mm), tumor location (side and lobe) and histology. Survival analysis was performed using Kaplan-Meier estimates and the log-rank test was used for the equality between the groups. P values less than 0.05 were considered statistically significant.

Results: There were no postoperative deaths and complication rate were similar in the two groups. There were no significant differences in recurrence rates (13%; 6 out of 48 in both groups) and all recurrence occurred in distant sites not in local site in both groups. Overall 5-year survival rate (83% in conventional approach and 77% in video-assisted approach) did not differ between groups ($P = 0.69$).

Conclusions: VATS lobectomy offered a similar prognosis provided by conventional lobectomy and is acceptable as the valid oncological surgery at least for stage IA NSCLC.

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Systematic mediastinal lymphadenectomy results in local and systemic immunosuppression after lung cancer surgery

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Objective: To assess influence of mediastinal lymphadenectomy on postoperative level of peripheral blood lymphocytes, as well as concentration of interleukin 6 (IL-6) and interleukin 1 receptor antagonist (IL-1ra) in serum, sputum and pleural fluid, in patients operated on due to lung cancer.

Methods: 23 patients undergoing uncomplicated resection due to lung cancer (11 with right lung cancer and 12 with left lung cancer) were analyzed. In patients with right lung cancer systematic lymphadenectomy, while in patients with left lung cancer systematic sampling was performed. Serum IL-6 and IL-1ra concentration was measured before and after surgery, and on postoperative day 1, 3, and 7, as well as in sputum at the end of surgery and in pleural fluid on postoperative day 1 by ELISA test. Peripheral blood lymphocyte level was assessed with flow cytometry.

Results: Time of surgery was higher in patients after right than after left thoracotomy (154.1±31.29 vs 119.6±24.81 minutes; p=0.008). The number of resected mediastinal lymph nodes was higher in patients after right than left thoracotomy (27.6±7.6 vs. 11.1±8.1; p=0.00006). Postoperative decrease of peripheral blood lymphocytes was significantly higher in patients after right than left thoracotomy (1.25±0.37 vs 1.75±0.64 * 103/iL; p=0.04). No significant differences were found in serum, pleural fluid and sputum concentration of IL-6 and IL-1ra between patients after right and left thoracotomy (Fig. 1), but negative